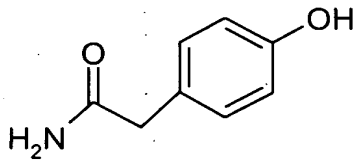
CLAIMS:

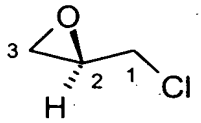
1. An improved for the preparation of (S)- atenolol (**1**), comprising the steps of:

   a) reacting a phenol of formula **2**:



2

with an (R)-epichlorohydrin of formula (**3**) :



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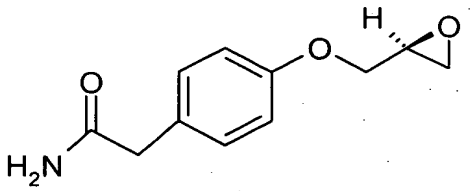
in presence of an alkali metal hydroxide and a quaternary ammonium salt as phase transfer catalyst in an aqueous solution at a temperature of -10° C to 0° C to obtain optically active intermediate glycidyl ether of formula **4**:



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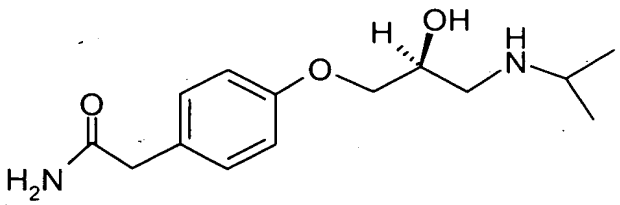
b) reacting the optically active intermediate glycidyl ether (**4**) with isopropylamine at 10° to 40° C to obtain (S)-atenolol of formula **1**:



1

in high optical purity of >99 ee.

2. A process as claimed in claim 1 wherein the alkali metal hydroxide is selected from sodium hydroxide or potassium hydroxide.

3. A process as claimed in claim 1 wherein the amount of alkali metal hydroxide is 1 to 1.5 moles to 1 mole of the phenol (**2**).

4. A process as claimed in claim 1 wherein the amount of (R)-epichlorohydrin is 1 to 3 moles to 1 mole of the phenol (**2**).

5. A process as claimed in claim 1 wherein the quaternary ammonium salt has the formula $\mathbf{R^1R^2R^3R^4N^+X^-}$

Wherein R^1, R^2, R^3 and R^4 are same or different and are alkyl groups having 1 to 16 carbon atoms selected from methyl, ethyl, propyl butyl, phenyl or benzyl, X is a group selected from chlorine, bromine, iodine, hydrogen sulphate or hydroxyl group.

6. A process as claimed in claim 1 wherein the amount of quaternary ammonium salt is 0.001 to 2% by weight of phenol (**2**).

7. A process as claimed in claim 1 further comprising formation of chlorohydrine (**5**) as side product.

8. A process as claimed in claim 1 further comprising reacting chlorohydrine (**5**) with isolpropylamine at 10 to 40°C to obtain S-atenolol.